

Fair deal or ordeal? Enquiry into the sustainability of commercial banana production in the Lao PDR¹

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Introduction

Since the launching of the New Economic Mechanism in the late 1980s, the government of the Lao PDR has been promoting commercial agriculture through the promotion of contract farming and foreign direct investment (FDI). Lao agriculture sector has relatively small and inexperienced agribusiness enterprises. With large areas of fallow land, and a lowly productive agriculture still dominated by smallholder subsistence farming, the Lao PDR has also been targeted by agribusiness investors from neighboring countries (*e.g.*, Vietnam, Thailand, China) seeking free agriculture land. The very rapid expansion of commercial banana production since 2005 takes place within this context. In 2014, banana production covered a total area of 22,920 ha, while banana exports reached 260,000 tons representing a total value of 45 million US\$. 88% of the bananas exported were sent to China, while the remaining 12% were exported to Thailand. However, Lao bananas were not identifiable on global and regional markets as most banana exports were informal (they came with no certificate of origin or phytosanitary certification). While several local varieties of bananas (*kluay nam*) are cultivated using traditional farming methods and consumed within the country, Cavendish bananas are mainly grown using non-traditional farming techniques (*i.e.*, on larger surfaces, using chemical inputs and wage work), and mainly commercialized abroad.

The main objective of this research is to better understand the drivers, pathways and impacts of change (at the level of both rural communities and production basins) of the expansion of commercial banana production in Northern Laos. Our main hypothesis is that a better understanding of the social and economic forces at work behind the current expansion of banana production is crucial to help both local communities and government agencies develop alternative pathways for sustainable development. Such alternatives may take the form of more sustainable banana production systems or the identification of more suitable (in economic and environmental terms) crops. From a government perspective, this research could help fine-tune policy options to ensure that commercial banana production benefits all stakeholders (*i.e.* from the investors to the workers).

Rationale and implications

In the absence of any systematic information on commercial banana production in small, medium and large plantations in the Lao PDR, it is necessary to describe carefully the different production arrangements (*e.g.*, land concession, land leasing, contract farming) developed in the context of global, regional, and domestic markets for bananas and processed banana products. It is also important to evaluate the social, economic and environmental impacts of commercial banana production and to develop practical measures to mitigate those impacts. Indeed, despite immediate economic gains, some of the business models developed for commercial banana production might be more harmful than beneficial to rural communities, as well as detrimental to local land-based resources.

Moreover, it is essential to clarify the roles and responsibilities of the various stakeholders involved: 1/ at the government level, a proper regulatory framework and adapted procedures are necessary to improve the management of foreign investment. Namely, there is a need for improved standards/criteria to help

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select FDIs in the agricultural sector, keeping in mind the need to establish fruitful partnerships between the government and responsible investors. Such standards should not consider only the financial return on investment, but also the expected social and environmental impacts on local communities; 2/ at the investors' level, practical and cost-effective production and field management measures are needed to mitigate the socioeconomic, environmental, and agro-ecological impacts of commercial banana production. Practical and financially feasible mitigation measures are also needed to compensate for negative socio-economic, environmental, and agro-ecological impacts of commercial banana production on agriculture land concessions and land leased from smallholder farmers.

Materials and methods

A mixed method approach was used for data collection and analysis. Field observations were made by the researchers during the visits of various types of banana plantations in five provinces of the Lao PDR (Luang Namtha, Oudomxay, Phongsali, Salavane and Bolikhamxay). Qualitative surveys (semi-structured and groups interviews) were also carried out with key stakeholders (government officers at the provincial and district levels, plantation owners, smallholder farmers, etc.) to understand the perceptions, practices, and future plans for banana production. Finally, a quantitative survey was carried out with: farmers who leased their land to banana plantations, independent banana farmers and workers employed on banana plantations. This survey aimed to assess the economic returns to banana production and farmers'/workers' knowledge and perception of issues related to the use of chemicals on the plantation.

Main results and findings

The recent development of banana production in the Lao PDR can be explained by pull factors in the Lao PDR (*e.g.*, appropriate conditions of production such as good weather and fertile soil, the low price of land and low labor costs); and push factors in China (*e.g.*, strict measures in favor of clean production, higher production costs, pests and diseases, decline in soil fertility in banana production areas). These conditions brought investors to look for new production areas to reduce production risks and to increase their profits.

The Lao PDR offers unscrupulous investors a favorable environment for banana production that combines poor law enforcement, porous borders and vulnerable workers at the mercy of unscrupulous employers. Namely, the survey reveals a very heavy use of chemical substances in commercial banana plantations. Herbicides, fertilizers, nutrients, insecticides, and additives were used throughout the production process (around 40 times/production cycle). Between 105 and 140 different chemical substances were applied, sometimes mixed and sprayed together, thereby increasing their degree of harm. Farmers knew little about how those substances should be handled and used. Very few were able to read the labels on the containers, as they were often written in Chinese. Farmers rarely followed appropriate practices regarding the use of protective equipment when spraying, or safe spraying methods. Finally, there was no proper management of chemical containers after usage.

We also compare the economic returns associated with different business models and show that benefits from short-term land lease fees were higher than those of long-term concessions. Although land concessions provided lower benefits, they were easier to regulate, manage and control. On the other hand, banana production also meant lost opportunities in land use for other crops and increased the price of other crops, especially rice. Banana production required heavy investments in infrastructure (road, water system) and an intensive use of inputs (fertilizers, water), which pushed up production costs. Companies invested in infrastructure (*e.g.*, road access, electricity, health centers) and sometimes contributed to social activities at the village/district level (*e.g.* to support meeting, social events, etc.).

Finally, a survey of those employed on the banana plantations revealed that these workers were from very poor and vulnerable communities (ethnic minorities). In terms of health, 8% of the banana farmers/families in the North reported having been sick over the past six months. On average, banana workers

had been sick four times over the past six months (four days each time) but could continue to work normally. At the household level, increased expenditures for health care and the environment /the value of which is difficult to assess may outweigh the benefits of being employed in a plantation (*e.g.* employment opportunities, incomes). Finally, as those employed on the banana plantations belonged to poor communities living in vulnerable areas, they were especially at risk due to their low level of education and poor knowledge regarding the safe use of chemicals. Finally, children were also at risk as they would rather stay with their parents on the plantation than go to school, which posed further threats to their health.

Conclusion

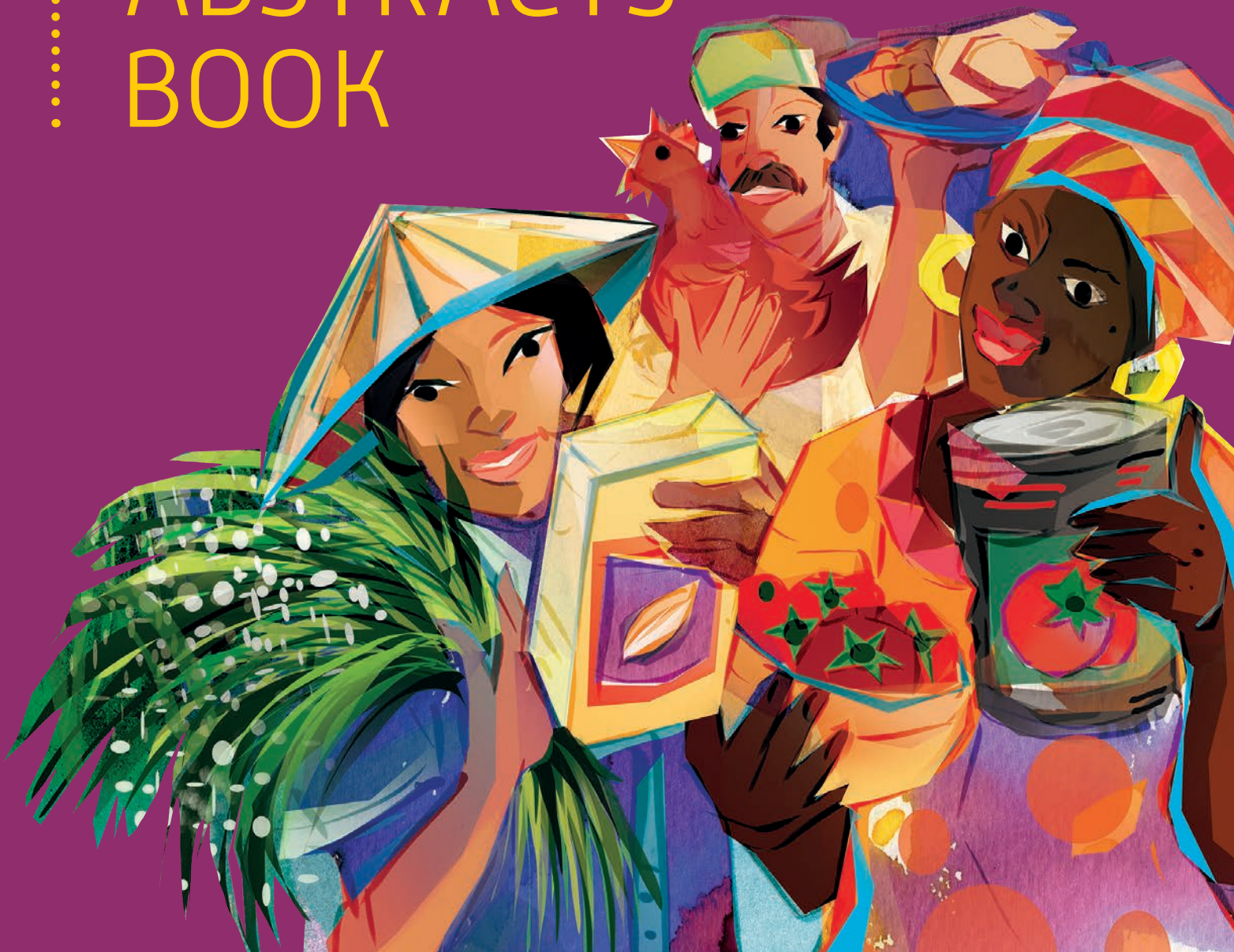
Despite benefits in terms of income generation, employment opportunities or fiscal revenues, the impact of banana plantations on the environment and the health (of plantation workers and consumers) due to the intensive use of chemicals is potentially very high. In the Lao PDR, laws and regulations existed but were not enforced, especially the processes for approving investment in banana production, and for monitoring and evaluating banana production. There was no systematic coordination between the various agencies in charge of overseeing such investment at the central (ministry) and local (provincial and district authorities) levels. This study concludes by proposing concrete measures to better monitor foreign investment in the banana sector.

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Agri-Chains & Sustainable Development
> *Linking local and global dynamics*

ABSTRACTS BOOK



WELCOME ADDRESS

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Welcome to AC&SD 2016

On behalf of the Scientific and Organizing Committees, it is a great pleasure to welcome you to the International Conference on Agri-chains and Sustainable Development (AC&SD 2016). This conference aspires to widen the debate about the role of agricultural value chains towards sustainable development. Year 2015 was a critical political and diplomatic milestone: the member states of the United Nations signed a new agenda for development, with the 17 Sustainable Development Goals (SDGs) placing sustainability at the core of international efforts. Development and academic actors are since then exploring new avenues for translating the SDGs into reality and implementing global and local frameworks and partnerships. Our conference aims at joining these efforts, with the consideration that agricultural value chains form spaces where local and global challenges to sustainability connect and within which local and global actors experiment and negotiate innovative solutions.

The scientific committee has assembled a very attractive program for AC&SD 2016 that seeks to cover and confront the diversity of realities behind agri-chains, from localized chains, embedded in specific places, to global value chains. In the parallel sessions, transformations of these agri-chains and their connections to sustainable development will be discussed by speakers from the academia, the civil society, the private sector and decision makers. This multi-stakeholder perspective will also be brought about in the plenary sessions. Here, world renowned keynotes and panelists to three high level round tables will discuss about the role and importance of evaluation, public and private institutions and innovations at different scales for transforming agri-chains towards sustainability transitions.

This edition gathers about 250 participants from 39 countries. AC&SD 2016 owes a lot to the scientific and organizing committees for preparing the program, and particularly to Brigitte Cabantous, Chantal Carrasco and Nathalie Curiallet for all the logistics, as well as to our support team of Alpha Visa that we warmly thank for their help.

We wish us all a fascinating, successful, inspiring and enjoyable AC&SD 2016 and we very much look forward to its result and to the strengthening of both a scientific community and a community of practice to implement the outcome!!

Estelle Biénabe, Patrick Caron and Flavia Fabiano,
Cirad Co-chairs AC&SD 2016

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